

## ABSTRACT

Polynucleotides encoding mammalian ECM signalling molecules affecting the cell adhesion, migration, and proliferation activities characterizing such complex biological processes as angiogenesis, chondrogenesis, and oncogenesis, are provided. The polynucleotide compositions include DNAs and RNAs comprising part, or all, of an ECM signalling molecule coding sequence, or biological equivalents. Polypeptide compositions are also provided. The polypeptide compositions comprise mammalian ECM signalling molecules, peptide fragments, inhibitory peptides capable of interacting with receptors for ECM signalling molecules, and antibody products recognizing Cyr61. Also provided are methods for producing mammalian ECM signalling molecules. Further provided are methods for using mammalian ECM signalling molecules to screen for, and/or modulate, disorders associated with angiogenesis, chondrogenesis, and oncogenesis; *ex vivo* methods for using mammalian ECM signalling molecules to prepare blood products are also provided.